

moves down within a holder 10 when downward pressure is applied to the contact surface and moves up under the urging of spring 7. When the contact surface 6 is in a predetermined position (adjacent switch 9 and detent 10a), switch 9 is turned ON to operate the fingerprint detection apparatus. The force of spring 7 is set so that when the contact surface is in the predetermined position the pressure on the contact surface is suitable for detecting a fingerprint (page 7, lines 18-22). That is, a finger must press down on the contact surface with a suitable pressure even when the contact surface is in the predetermined position. The predetermined position is said to be a "lock" but, as is apparent, this a loose lock since the contact surface will move up and out of the predetermined position when the downward pressure suitable for detecting a fingerprint is removed from the contact surface. The "lock" helps the user apply the correct pressure to the contact surface by providing a reference position that the user's fingertip is to maintain.

Note that the holder 10 extends above and below the predetermined position. There is nothing to prevent the contact surface from moving below the predetermined position if too much pressure is applied to the contact surface. Since the object of the invention is to reduce pressure variation on the contact surface, the device must provide consequences when the pressure is too low and too high. If the downward pressure is too low, the contact surface will move up, breaking contact with the switch. If the downward pressure is too high, the contact surface will move down, breaking contact with the switch. If the device has no consequences for application of too much pressure, the

pressure would not be uniform; that is, the pressure could vary so long as it is above the pressure needed to push the contact surface into the predetermined position. With the invention of claim 20, the user must adjust fingertip pressure to hold the contact surface in the predetermined position to avoid turning OFF switch 9.

Accordingly, as indicated by the extension of the holder 10 below the predetermined position and for the reasons given above, the contact surface must be able to move below the detent 10a when pressure on the contact surface is greater than the desired (first) pressure. The application as filed conveys to the artisan sufficient information to be able to make and use the claimed invention.

The Official Action objects to the drawings for not showing the restraint that permits movement below the detent. As noted above, the extension of holder 10 below the detent is shown in Figure 1. This extension permits movement of the restraint below the detent. Reconsideration and withdrawal of the objection to the drawings are respectfully requested.

Claims 20-23 were rejected as unpatentable over SHIMIZU et al. (JP 58-201178) in view of NISHIKI (JP 64-68894). Reconsideration and withdrawal of the rejection are respectfully requested.

The Official Action acknowledges that SHIMIZU et al. do not disclose a restraint having a detent position at a depressed location of the contact surface and urging the contact surface to remain in the detent position when a first pressure is applied to the contact surface. The Official Action relies on NISHIKI for

this feature, pointing to detector 5 and page 5, lines 12-20 and page 6, lines 1-12.

However, as indicated at page 5, lines 17-18, of NISHIKI, detector 5 stops movement of transparent body 2, and prevents movement of body 2 beyond detector 5. The reference states that when body 2 is pushed to detector 5 there is sufficient pressure to detect a fingerprint. The reference does not account for the situation in which too much pressure is applied to body 2. Once body 2 reaches detector 5, the user may continue to increase the pressure or cause the pressure to vary so long as the pressure is sufficient to maintain contact with detector 5. This is the very problem avoided by the invention of claim 20. If one of skill in the art were to apply this teaching to SHIMIZU et al., the same problem would be carried over. Nothing in either reference suggests a detent that permits movement of the contact surface below the detent position when pressure on the contact surface is greater than the desired (first) pressure and above the detent position when pressure on the contact surface is less than the first pressure.

Further, detector 5 is not a detent position of a restraint at a depressed location of the contact surface. Detector 5 is a stopper that projects into the path of the contact surface. The combination of references suggests adding a projecting stopper to the restraint in SHIMIZU et al., not a detent that allows the contact surface to move through the detent.

Claim 23 further requires that the restraint is a spring member with a recess that defines the detent position. As noted above, neither reference discloses the detent. In addition, neither reference discloses that the restraint is a spring member with a recess. Since neither reference discloses this feature, the feature would not be obvious to one of skill in the art. The Official Action points to spring 4 in NISHIKI, but spring 4 does not have a recess that defines the detent position. Claim 24 provides that the contact surface has a projection that fits into the recess that defines the detent position. The Official Action points to support unit 3 for this feature. However, nothing in support 3 projects into a recess in the spring member. Reconsideration and withdrawal of the rejection of these claims are respectfully requested for these additional reasons.

The remaining claims were rejected in view of further references. All of the claims are dependent from claim 20 and are allowable for the reasons set forth above.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been

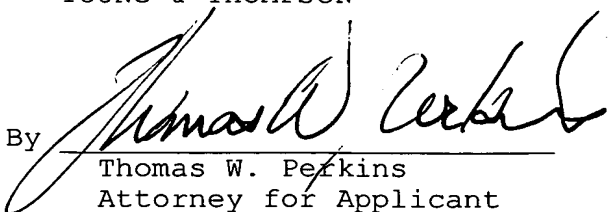
HOSHINO S.N. 09/252,034

placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Respectfully submitted,

YOUNG & THOMPSON

By



Thomas W. Perkins
Attorney for Applicant
Registration No. 33,027
745 South 23rd Street
Arlington, VA 22202
Telephone: 521-2297

May 2, 2001